

IN THE CLAIMS:

1. (Allowed) A method for suctioning a boundary layer at a surface of an aircraft having an air-conditioning system, the air conditioning system having an air mixer unit, for supplying a pressurized aircraft cabin with conditioned air, and at flow-critical points of the surface, the surface has multiple suction openings provided for boundary layer suctioning of suction air, the method comprising the steps of:

feeding a quantity of the suction air to the air mixer unit of the air-conditioning system of the aircraft to reduce flow losses; and

feeding a portion of the cabin air to the air mixer unit such that the portion of the cabin air is returned into the air-conditioning system via the mixer unit and is mixed with the quantity of the suction air to form a mixture prior to discharging the mixture to the cabin.

2. (Cancelled)

3. (Cancelled)

4. (Allowed) The method of claim 1, further comprising the step of:

feeding the quantity of the suction air to a line connection assigned to an unpressurized line region without artificial pressure.

5. (Allowed) The method of claim 1, further comprising the step of:

bringing the quantity of the suction air to cabin pressure before introducing the quantity of the suction air into the aircraft cabin.

6 (Allowed) The method of claim 1, further comprising the step of:

adjusting at least one of a temperature and a humidity of the suction air in the air-conditioning system.

7. (Currently amended) A device for suctioning and treating suction air from a boundary layer at a surface of an aircraft having an air-conditioning system for conditioning cabin air of a pressurized cabin of the aircraft, the device comprising:

openings positioned at flow-critical points of the surface;

a recirculation line;

a duct system; and

an air mixer unit, wherein the duct system ~~[[feeds]]~~ couples the air mixer unit and the openings and feeds the suction from the openings of the surface of the aircraft to the air mixer unit, and the recirculation line is coupled to the air mixer unit, such that a portion of cabin air is returned to the mixer unit from the cabin of the aircraft adjusting temperature and humidity of a mixture including the suction air and the portion of cabin air prior to the discharge of the mixture into the cabin.

8. (Cancelled)

9. (Allowed) The device of claim 7, further comprising:

a compression unit; into the duct system such that the suction air is brought to cabin pressure by the compression unit before introduction of the suction air into the air mixer unit of the air-conditioning system.

10. (Allowed) The device of claim 7,

wherein the openings are positioned in a flow-critical region of a wing assembly surface or a tail assembly surface.

11. (Allowed) The device of claim 7, further comprising:

a suction source;

wherein the duct system is connected to the suction source for generating a suction effect required for the suctioning.